

**CLAIMS**

- 1.- A physical process causing the effect of preserving fish or meat food throughout long periods of time, tens of months, thus preserving the properties of a fresh product, wherein said process comprises the
- 5 following steps:
- a) Capturing, eviscerating, cleaning, and washing the fish, all in an hygienic environment;
  - b) Keeping said fish under moderate cold, using ice scales or adequate cold facilities;
  - 10 c) Cutting the fish in agreement with the commercial requirements to be satisfied;
  - d) Subjecting the fish to an initial quick freezing (IQF) process, i.e. reaching a temperature of around  $-5^{\circ}\text{C}$  in the center of the fish piece in a maximum of 1.5 hours;
  - 15 e) Packaging the product in special packages, which possess high impermeability to gases, basically oxygen, nitrogen and carbon anhydride, as well as to water vapor, and are at the same time highly resistant both to physical stress and to a wide range of temperatures from  $-60$  to  $100^{\circ}\text{C}$ , even though they can endure sealing temperatures in the range from  $+130$
  - 20 to  $+200^{\circ}\text{C}$ ;
  - f) Subjecting the packed product to a "high vacuum" process, wherein "high vacuum" is defined as a 99% vacuum;
  - g) Continuing the quick freezing of step (d) from around  $-5^{\circ}\text{C}$  to reach a temperature of around  $-18^{\circ}\text{C}$  in the center of the meat piece in a
  - 25 maximum of 2 hours including the packaging time;
  - h) Keeping the packed product at low and uniform temperatures around  $-18^{\circ}\text{C}$ , in resistant plastified cardboard boxes, using pile-up systems if said boxes were not auto-supportive;
  - i) Using the treated product by taking it out from the freezing
  - 30 chambers or freezers and subjecting it to defrosting by a clean packing extraction process, preserving the product in the butter chamber of a

refrigerator, ready to be consumed in 1 to 3 days by treating it as a fresh product;

- j) Consuming the treated product in agreement with the user intentions, even subjecting it to cooking in a microwave oven or in hot water including the package.

2.- A physical process causing the effect of preserving fish or meat food throughout long periods of time according to claim 1, wherein said package consists of materials which have a high impermeability to gases, water vapor, and many diverse type of odorants.

- 3.- A physical process causing the effect of preserving fish or meat food throughout long periods of time according to claim 1, wherein said step (e) is carried out using facilities or equipments to produce high vacuum, using materials that fulfill the general requirements indicated in said step (e) of claim 1, wherein the permeabilities to gases, water vapor and temperature resistances should be located between the limits set forth in the following table:

Permeability to gases (cm <sup>3</sup> /m <sup>2</sup> – 24h, - bar, at 75% relative humidity)			Permeability to water vapor (g/cm <sup>2</sup> - 24 h at 20°C – 85% relative humidity)	Temperature resistance (°C)	Sealing temperature ( °C)
Oxygen	Carbonic anhydride	Nitrogen			
4 to 10	12 to 30	1.3 to 5	0.1 to 0.6	-60 to +100	+130 to +200

- 4.- A physical process causing the effect of preserving fish or meat food throughout long periods of time according to claim 1, wherein said

step (e) considers materials that do not transmit odors and flavors independently of the temperatures to which they are subjected in this process; such materials being highly resistant, both to physical stress and to a wide range of temperatures; such materials being also flexible enough  
5 to be able to adapt to surfaces of diverse shapes and textures, including soft and sharp edges, in the context of typical requirements in a high vacuum process.

5.- A physical process causing the effect of preserving fish or meat food throughout long periods of time according to claim 1, wherein said  
10 steps (d) to (g) could be carried out together in a single *ad hoc* industrial facility, maintaining the specified sequence.